

9-1965

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Recommended Citation

Barnard, Jerald R. and Maki, Willbur R. (1965) "Iowa's Economy in 1974," *Iowa Farm Science*: Vol. 20 : No. 3 , Article 3.

Available at: <https://lib.dr.iastate.edu/farmscience/vol20/iss3/3>

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IOWA'S ECONOMY in 1974

In Iowa farming is rapidly becoming more mechanized and less labor-intensive. As a result, fewer households are supported by farming, and more households are supported indirectly by farm-related businesses.

by Jerald R. Barnard and Wilbur R. Maki

IOWA'S ECONOMY is changing . . . from a producer of agricultural products to an exporter of processed farm products, farm machinery, insurance and related goods and services. This change is influencing employment patterns, manufacturing, and population.

Farming is rapidly becoming a capital-related industry instead of a labor-related industry. And there is a sharp overall shift in employment among Iowa's industries. While 19 percent of the employed labor force depended on agriculture as a major source of income in 1964, by 1974 this percentage will drop to 14 percent. On the other hand, the expected increase in manufacturing employment will be from 18 to 19 percent, while service employment is expected to increase from 63 to 67 percent of the total employment.

Behind this shift are two powerful forces shaping Iowa's economic progress: (1) technological progress and (2) expanding market outlets.

Technology and Demand . . .

Because agricultural productivity per worker is rising more rapidly than demand for Iowa agricultural products, agricultural employment is expected to decline from 199,000 to 150,000 persons by 1974. Iowa manufacturing productivity per worker is also increasing by more than 2 percent per year. But total manufacturing jobs will

increase from an estimated 182,100 in 1964 to 198,700 or more by 1974. Iowa factory output is increasing more rapidly than productivity, therefore total manufacturing employment is increasing.

The service industries, on the other hand, show only small increases in productivity per worker. Except in the transportation, communications and public utilities industries, output per worker is increasing by less than 2 percent per year. But demand is increasing faster. Largely as a result of growth in per capita incomes, demand for the output of Iowa ser-

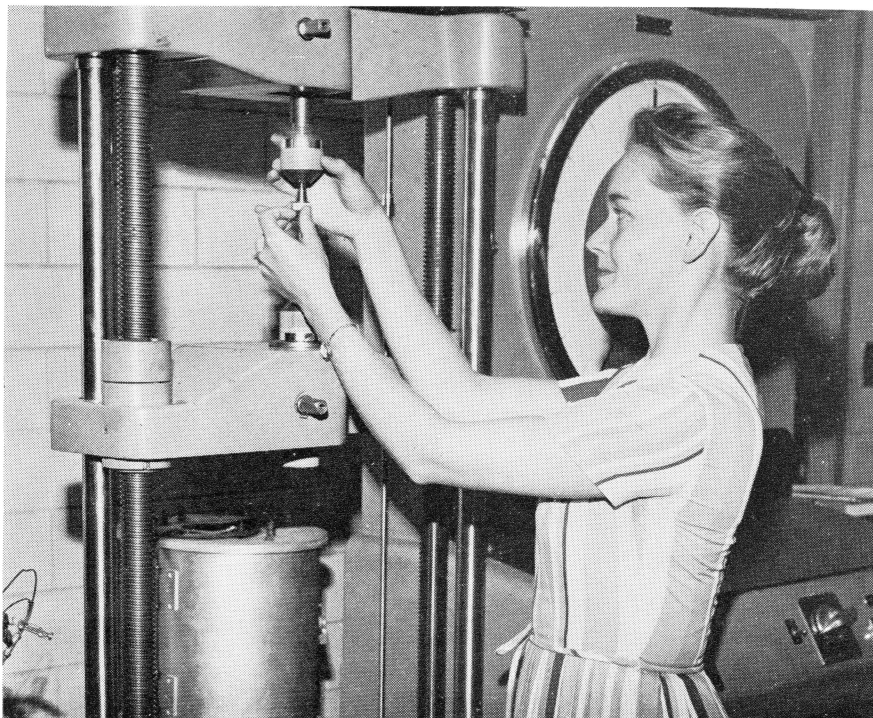
vice industries is growing by about 2.6 percent per year. Thus, total employment in the service industries is estimated to increase from the 642,900 persons employed in 1964 to 717,400 workers by 1974. *The service industries therefore, offer the major new job opportunities in Iowa over the next decade.*

Agricultural Trends . . .

Increased yields of crops per acre and of livestock products per animal unit have contributed to the growth in agricultural output. These effects of farm technology are reflected in employment (see table 1). Income per farm worker has been maintained at higher levels than would have been possible without off-farm migration.

Population Trends . . .

Forecasts based on the post World War II period indicate barely enough growth in manufacturing and service industries to balance the losses in farm employment between now and 1974. Consequently, Iowa's projected population in 1974 should increase to



The shifting employment trends show women entering all fields of industry and business. Here a woman sets up a tensile test as part of her work at the Ames Laboratory of the Atomic Energy Commission.

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TABLE 1. Selected trends in Iowa agriculture, 1954-74.

Year	Persons living on farms	Number of farm workers	"Full time" agricultural employment
	(thousands)	(thousands)	(thousands)
1954	735	341	266
1964	603	286	199
1974	452	243	150

TABLE 2. Estimated population, Iowa and United States, 1954-74.

Year	Iowa	United States	Iowa as proportion of United States
	(thousand)	(thousand)	(percent)
1954	2,685	163,026	1.65
1964	2,791	191,602	1.46
1974	2,920	223,754	1.31

TABLE 3. Estimated population and labor force participation rates, by age and sex, Iowa, 1954-74.

Sex and age class	1954		1964		1974	
	Estimated population	Proportion in labor force	Estimated population	Proportion in labor force	Estimated population	Proportion in labor force
	(thousand)	(percent)	(thousand)	(percent)	(thousand)	(percent)
Male:						
15-24	181	71	201	67	241	68
25-44	341	95	301	95	288	95
45-64	278	89	273	90	267	89
65 and over	142	37	151	34	151	29
Female:						
15-24	187	36	205	38	247	41
25-44	346	30	316	35	312	40
45-64	282	32	287	40	286	49
65 and over	162	9	184	11	193	14
Total	1,919	54	1,918	54	1,985	56

2,920,000 — only 129,000 above the 1964 level of 2,791,000 (table 2). The expected increase in total employment also is small — only 42,600.

Iowa's population has been increasing at a substantially slower rate than national population since 1900. By 1954 Iowa population declined to 1.65 percent of the national population. And by 1974, estimates place Iowa population at

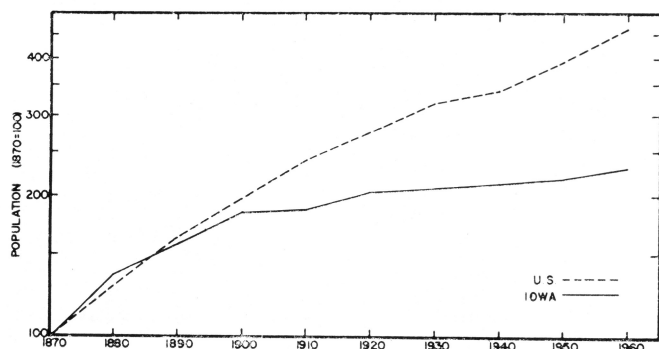


Fig. 1. Population trends, Iowa and the United States, 1870-1960.

only 1.31 percent of the total national population (table 2).

A large part of this decline is due to out-of-state migration, particularly the age group from 25 to 44. Since 1930, this group has accounted for 75 to 80 percent of total migration. And unless industrial development is accelerated, lack of economic opportunity will force many men and women 25 to 44 years of age out of the state. Because of this migration, older age groups will make up a larger portion of the total population in 1974 than in 1964.

Labor Force Trends . . .

The labor force relative to population in Iowa has remained quite stable, showing only slight increases in the proportion of the population in the labor force. The female labor force, is increasing substantially as shown in table 3. On the other hand, the male labor force is declining slightly because of compulsory education and earlier retirement.

Employment Trends . . .

Analysis of historical trends of industrial employment shows the consequences of the recent labor

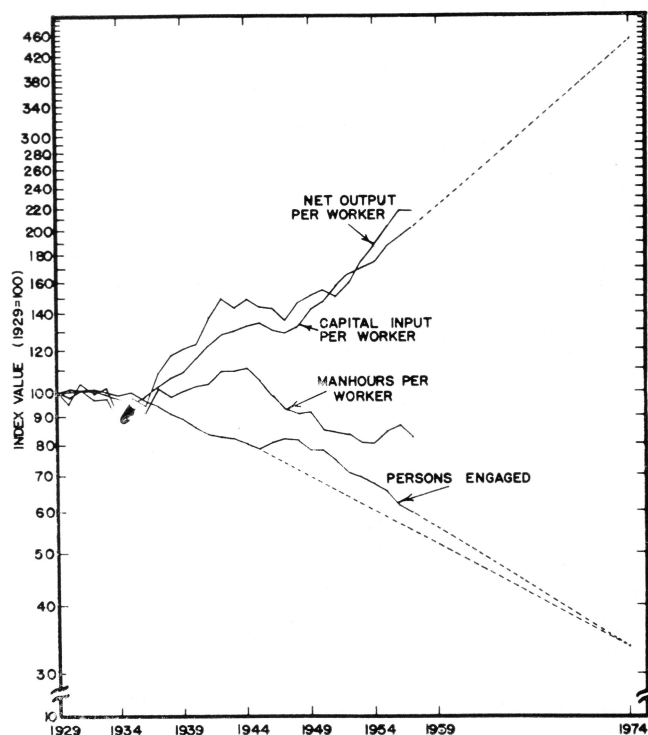


Fig. 2. Farm output per farm worker and related data, United States, 1929-59.

force changes. Growth in employment in the service industries will be accompanied by a rapid expansion in female employment. In addition to the service industries, the electrical machinery industry — also a rapidly growing industry — is expected to provide additional job opportunities for women.

Future opportunities in industry for males will be mainly in such industries as chemicals, nondurable manufactured goods, machinery and equipment, communications and utilities, retail trade, and construction. In most of the other industries listed in table 4, only small increases or decreases are expected in male employment.

Income Trends . . .

Illustrating the decline of agriculture's share of total income in Iowa are personal income figures. Estimates of personal income for 1964 and 1974 — relative to the 1954 levels — are shown in table 5. These estimates are based on projected levels of wages and salaries per worker and the relationship between total wages and salaries and total personal income.

Because of the decline in agricultural income, total personal income payments in Iowa are increasing less rapidly than would be expected on the basis of the projected nonagricultural wages and salaries. Nonagricultural wage and salary payments, however, are expected to increase about 34 percent during the 1964-1974 period.

In agriculture, income per worker is expected to grow from its 1954 level of \$3,600 to \$6,200 by 1974 (in constant 1954 dollars). Personal income per capita, for the state as a whole, is expected to increase 39 percent from its 1954 level of \$1,708 to \$2,370 in 1974 (in constant 1954 dollars). Higher wages and salaries, along with increased earnings per farm and non-farm proprietor, are contributing to increased per capita purchasing power. The higher incomes will mean expansion of consumer markets, particularly for personal and professional services.

Summary . . .

This brief survey of the prospects for Iowa's economy in 1974

illustrates the changing pattern of economic activity from predominantly farming to manufacturing and service activities carried on in the larger urban trade centers. Farming is becoming more mechanized and less labor-intensive. Thus,

the services required by farmers are changing from predominantly labor-related to capital-related activities. As a result, fewer households are supported by farming, and more households are supported indirectly by farm-related businesses.

TABLE 4. Estimated number of persons employed in specified industries, Iowa, 1954-74.

Sector	1954		1964		1974	
	Total employment	Wage and salary workers	Total employment	Wage and salary workers	Total employment	Wage and salary workers
(thousands)						
Agriculture	266.0	34.6	199.0	26.0	150.5	19.6
Manufacturing						
Mining	3.2	3.1	2.7	2.6	2.2	2.1
Meat products	28.1	28.0	26.1	25.9	23.9	23.9
Dairy & grain mill products	12.2	11.7	11.6	11.1	10.8	10.5
Other food & kindred products	11.8	11.6	12.1	11.8	12.3	12.1
Printing & allied	11.9	11.4	13.6	13.1	15.4	15.0
Chemicals & allied	6.2	6.1	7.3	7.2	8.5	8.4
Other nondurables	10.9	10.8	12.3	12.1	13.6	13.5
Building materials	13.7	13.4	13.4	13.1	13.0	12.8
Primary & fabricated metals	11.8	11.6	14.9	14.6	18.5	18.3
Farm machinery & equipment	16.1	16.0	20.4	20.3	25.6	25.5
Other machinery	17.4	17.2	18.4	18.0	19.1	19.0
Electrical machinery	9.2	9.2	14.0	13.9	21.2	21.2
Other durable goods	15.9	15.7	15.3	15.1	14.6	14.5
Total	165.2	162.7	182.1	178.8	198.7	196.8
Service industries						
Transportation	44.2	41.0	38.4	35.8	32.9	31.2
Communications & utilities	24.9	24.8	29.5	29.1	34.3	34.2
Wholesale trade	41.4	37.6	42.5	38.7	42.9	40.0
Retail trade	154.0	117.7	174.8	137.7	195.2	161.8
Finance, real estate & ins.	31.3	27.2	36.9	32.5	42.9	38.9
Services	169.4	132.8	211.2	170.5	259.3	218.6
Construction	50.8	35.5	57.4	42.2	64.1	50.1
Public administration	58.6	58.6	52.2	51.8	45.8	45.8
Total	574.6	475.2	642.9	538.3	717.4	620.6
TOTAL	1,009.0	675.6	1,024.0	743.1	1,066.6	837.0

TABLE 5. Estimated index of personal income, Iowa, 1954 and 1974, (1954 = 100).

Item	Proportion of 1954 base		Proportion of total		
	1964	1974	1954	1964	1974
(percent)					
Agricultural:					
Wages and salaries	99	97	2	1	1
Proprietorial income	89	79	24	18	12
Total	90	80	26	19	13
Nonagricultural:					
Wages and salaries	139	193	46	52	58
Other income	125	157	28	29	29
Total	134	180	74	81	87
Total personal income	123	154	100	100	100